

PHOTOGRAPHY

FAQ

Q Why don't digital cameras always live up to their quoted continuous shooting speeds?

A Digital cameras contain fast memory, known as a buffer, which holds raw image data from the camera's sensor before it's processed and saved to a memory card. Whether the buffer has room for three, 10 or 30 shots, the camera should be able to shoot at its quoted continuous speed until the buffer is full, after which the performance will fall.

Some continuous modes aren't limited by the buffer size, as the camera can apply image processing, convert to JPEG and save to memory card as quickly as it can shoot. However, in this case performance may vary depending on the complexity of the image and the camera settings. The memory card's performance may also create a bottleneck, particularly in fast cameras such as digital SLRs.

Ben Pitt

Music and photography expert

ben@computershopper.co.uk

PENTAX Optio Z10

★★★★

£155 inc VAT

From www.bristolcameras.co.uk

There is a growing trend for ultra-compact cameras with non-protruding lenses, but Pentax's plastic-clad Z10 looks frumpy compared with the more stylish designs from Fujifilm and Sony. However, its 7x zoom lens lets you get much closer to the action, and isn't bad for a camera that's just 25mm thick. The lack of optical image stabilisation is disappointing, though, as big zooms increase the likelihood of blur.

The A30 (*Labs, Shopper 239*) bucked the Optio range's trend for poor performance, but the Z10's speed is similar to those of the older, slower models. There was a 3.5-second gap between shots, and an even longer wait when we tried to adjust a setting directly after taking a photo. The auto-focus took up to four seconds at telephoto zoom settings but was reasonably quick at wider angles. At least the controls are quick to operate, with straightforward menus that respond quickly to button pushes. A so-called Green button switches the camera to a fully automatic mode, but this can be reassigned to provide short cuts to any four photographic functions.

We really like the way you can limit the ISO speed range available in Auto ISO mode from 64-100 to 64-3200. In dwindling light, the camera automatically raises the ISO speed from the highest-quality ISO 64 setting as soon as the shutter speed reaches a particular threshold ($\frac{1}{50}$ seconds at the wide angle setting, $\frac{1}{250}$ seconds at telephoto). Then, once it reaches the designated maximum ISO speed, it continues to increase the shutter speed. This is exactly the way cameras should behave in low light, and having control

SUMMARY

- ✓ Big zoom in a small package
- ✓ Accessible, intelligent controls
- ✗ No image stabilisation

DIGITAL CAMERA 8.0 megapixels (3,264x2,448), 7x optical zoom (38-266mm), SDHC slot (52MB internal), Li-ion battery
PART CODE 19325
DETAILS www.pentax.co.uk

PERFORMANCE (see www.computershopper.co.uk/howwetest)

Battery life **275 shots** -50% Reference +50% +100%



over the maximum ISO speed enables the user to set their preference without having to adjust the settings for each shot.

The downside is that the Z10's image quality at higher ISO speeds isn't particularly impressive. Shots taken at ISO 400 were pretty noisy and, at ISO 800 or higher they became almost unusable. However, the noise levels were partly down to Pentax's restrained use of noise reduction processing, so there was still plenty of detail in photos at higher settings. Otherwise, image quality was competent but nothing special at this price. We saw a slight lack of crisp detail when we scrutinised shots up close, and colours were a touch under-saturated, although neither issue was serious enough to be a fatal flaw.

If you're after a compact camera with a big zoom range but you don't need to fit it into drainpipe jeans pockets, Sony's DSC-H3 (reviewed in the Labs on page 110) is a little bulkier and pricier but is a better camera. Meanwhile, if compactness is paramount, Casio's EX-V7 (*What's New, Shopper 235*) matches the Z10's size, 7x zoom and price, but its image stabilisation and superior performance make it a better buy.

Ben Pitt

Also consider...

PENTAX Optio A30

★★★★★

£130 inc VAT

From www.ebuyer.com

BEST BUY The Optio A30 has a 10-megapixel sensor and an optically stabilised 3x zoom lens. It's possible to set the maximum ISO speed in the Auto ISO mode, and this helps to reduce noise. This camera is quick to focus and images have warm, vibrant colours. Portraits have natural skin tones and highlights are not clipped.



DIGITAL CAMERA 10.0 megapixels (3,648x2,736), 3x optical zoom (38-114mm), SDHC slot (22MB internal), 710mAh li-ion battery
PART CODE 19215
DETAILS www.pentax.co.uk
FULL REVIEW Dec 2007

Battery life **283 shots** -50% Reference +50% +100%

PANASONIC Lumix DMC-FX33

★★★★★

£158 inc VAT

From www.ebuyer.com

PRICE CUT!

This exceptionally stylish ultra-compact camera is packed with enticing features including a 3.6x zoom and optical image stabilisation. It has intelligent Auto, which ensures great shots in tricky conditions. Test shots outdoors were impressive, with excellent colours; indoors noise-reduction trampled detail. Even so, it's a great compact camera at a low price.



DIGITAL CAMERA 8.0 megapixels (3,264x2,448), 3.6x optical zoom (28-100mm), SDHC card slot (27MB internal), li-ion battery
PART CODE DMC-FX33EB-S
DETAILS www.panasonic.co.uk
FULL REVIEW Feb 2008

Battery life **278 shots** -50% Reference +50% +100%

FUJIFILM FinePix Z100fd



£153 inc VAT
From www.dixons.co.uk

The Z100fd is a strong contender for the best-looking camera ever to grace the pages of *Shopper*. The brown finish resembles varnished wood, and it's also available in black and white, bright pink or a metallic-olive finish. The Z icon illuminates as you slide back the front cover to reveal the lens, and the slim design adds to its appeal. At the back is a 2.7in, 230,000-pixel screen and a selection of buttons.

Slim cameras often have room for only slim batteries, and sure enough the Z100fd's battery life is disappointing at 231 shots in our test, which is far short of the 400-shot average. An additional battery will set you back around £20. However, Fujifilm hasn't skimped in other areas, cramming an impressive number of features into the camera.

The lens has a 5x zoom range for greatly improved detail when shooting distant subjects. High zoom settings increase the likelihood of blur due to camera shake, so it's great to see that optical image stabilisation is built into the sensor. However, it didn't fare particularly well in our tests, keeping less than half of our shots blur-free at a 1/30-second shutter speed and a 100mm zoom position. This could be a basic limitation of Fujifilm's stabilisation technology, but we suspect it's more likely to be because the Z100fd's ultra-slim design makes it harder to hold steady compared with chunkier cameras.

The most surprising feature is infrared communication. This means that you could take a photo with the Z100fd and beam it to a mobile phone to send as a picture message or in an email, giving much better results than any camera phone can muster. However, infrared is rare among current mobile phones, and even fewer support the IrSimple protocol that the Z100fd requires. Fujifilm's website suggests that the feature is designed for transfers to other similarly equipped FinePix cameras, but we can't see much appeal in doing that.

The Z100fd introduces a new menu system, which is a significant step backwards from previous layouts. Pressing the Menu button presents a list of shooting modes and scene presets, among which is an option labelled Menu that presents the usual exposure compensation, ISO and white balance options. However, getting to these options takes a lot of button pushes. This is particularly frustrating because the camera wastes its dedicated buttons on image

stabilisation and face detection on/off controls. There's rarely any benefit in switching these off, so the buttons exist more to show off these features than to present the user with useful controls. Considering that this is clearly a point-and-shoot camera, it's also disappointing that the face detection system is the older implementation rather than Fujifilm's more



sophisticated updated version, as seen in its F50fd (*What's New, Shopper* 240).

Fujifilm's compact cameras aren't known for their fast performance, and the Z100fd doesn't rock the boat in this respect. It's reasonably quick to switch on and to focus, but we had to wait three seconds between shots, even in continuous mode. Browsing photos is slow, too, although we like the Micro Thumbnail mode's ability to display 100 shots at a time to help you find a particular one quickly.

Our image quality tests revealed that the Z100fd is capable of taking attractive photos, but as often as not, the two sub-£100 cameras on test this month produced better results. Colours were excellent in bright light but detail was a little vague. The automatic mode leapt to unnecessarily high ISO speeds in overcast lighting conditions, leading to increased noise levels and reduced detail. Noise-reduction processing gave a strange lattice texture and still failed to suppress blotches of colour.

The striking design and impressive specifications are tempting at this price but our tests revealed more problems than assets. Sony's T100 (*What's New, Shopper* 235) is a much better example of the same basic concept, although at a higher price.

Ben Pitt

SUMMARY

- ✓ Gorgeous, feature-packed design
- ✗ Mediocre image quality
- ✗ Laborious menu layout

DIGITAL CAMERA 8.0 megapixels (3,264x2,448), 5x optical zoom (35-177mm), SDHC and xD slots (54MB internal), li-ion battery
PART CODE NC00250A
DETAILS www.fujifilm.co.uk

PERFORMANCE (see www.computershopper.co.uk/howwetest)

Battery life **231 shots**

-50% Reference +50% +100%

NIKON Coolpix P5100



£196 inc VAT
From www.purelygadgets.co.uk

The Coolpix P5100 has a hotshoe and threaded lens ring for attaching accessories, and its body looks smart and feels robust. It's slow, taking three seconds between shots, but its image quality is excellent. Colour reproduction reminded us of SLR cameras. It's a pleasure to use and has stunning image quality.



DIGITAL CAMERA 12.0 megapixels (4,000x3,000), 3.5x optical zoom (35-123mm), SDHC card slot (25MB internal), li-ion battery
PART CODE VAAB40B1
DETAILS www.nikon.co.uk
FULL REVIEW Feb 2008

Battery life **348 shots**

-50% Reference +50% +100%

FUJIFILM FinePix F20



£98 inc VAT
From www.kikatek.com

Despite its low price, Fujifilm's FinePix F20 camera has a metal body and a lithium-ion battery. The F20's 2.7in screen is also above average for a budget camera.

The FinePix F20 offers superb image quality and produced pleasing colours and sharp detail. It is an excellent camera at an excellent price.



COMPACT DIGITAL CAMERA 6.1 megapixels (2,848x2,136), 3x optical zoom, 10MB internal memory, xD slot, 3.6V 1,150mAh li-ion battery
PART CODE N077830A
DETAILS www.fujifilm.co.uk
FULL REVIEW Sep 2007

Battery life **432 shots**

-50% Reference +50% +100%

CANON PowerShot A570 IS



£104 inc VAT
From www.bigcitydigital.co.uk

The A570 IS has a 4x optically stabilised zoom lens, which makes it great for counteracting camera shake, especially in low light. It also has face detection and full photographic control including aperture- and shutter-priority modes. Image quality is as good as we'd expect given the specifications and price.



DIGITAL CAMERA 7.1 megapixels (3,072x2,304), 4x optical zoom (35-140mm), SDHC slot (16MB card supplied), 2x AA batteries
PART CODE 1773B008AA
DETAILS www.canon.co.uk
FULL REVIEW Nov 2007

Battery life **348 shots**

-50% Reference +50% +100%

KODAK EasyShare M753

★★★★

£74 inc VAT

From www.dabs.com

The M753 is the most affordable model in Kodak's style-conscious range of cameras, but despite a choice of six fun colours it still manages to look fairly dull. It arrived with a bright yellow sticker on the front, which left adhesive when we removed it.

This is the most affordable camera we've ever seen with a Li-ion battery, which gave decent battery life in our test and will save on the cost of rechargeable AA cells and a charger. The controls are well laid out, with a mode dial, dedicated flash button and exposure compensation on the left and right navigation buttons. We don't like the way the flash setting defaults to Auto when you switch the camera on, though. The menu could be more efficient, too, with key settings such as ISO speed too far down the list. It's a shame that the up and down navigation buttons don't have additional roles – dedicated buttons for the self-timer and ISO speed would have been welcome.



Of all the cameras on test this month, the M753 was the worst performer. The auto-focus took at least a second and often longer to lock on to its subject, and performance took a nosedive after five successive shots. Continuous mode was at two frames per second but lasted for only four shots. Image quality tests revealed dependable

colours and reasonable detail in favourable lighting, but almost all our test shots looked scruffy when viewed up close – the result of a combination of image noise and heavy JPEG compression.

It may seem harsh to be so critical of such an inexpensive camera, but it's worth spending just a little more on Fujifilm's superior FinePix F20 (see Also consider..., page 36).

Ben Pitt

SUMMARY

- ✓ Li-ion battery and charger included
- ✗ Poor performance
- ✗ Scruffy photos

DIGITAL CAMERA 7.0 megapixels (3,056x2,292), 3x optical zoom (37-111mm), SD slot (16MB internal), Li-ion battery
PART CODE 8765257
DETAILS www.kodak.com

PERFORMANCE (see www.computershopper.co.uk/howwetest)

Battery life **425 shots**

-50% Reference +50% +100%

SAMSUNG Digimax L730

★★★★

£83 inc VAT

From www.dabs.com

A 7-megapixel camera for £83 isn't unusual, but finding one with an aluminium body, a 2½in, 230,000-pixel screen, an 800x592-pixel MPEG4 video capture and a Li-ion battery is a surprise. The design is smart and compact, although the etched button labels are hard to see in low light.

We're slowly getting used to Samsung's sprawling menu layout but other manufacturers' menus are easier to use. Crucial settings are quick to access, though, and the inclusion of a manual (but not priority) exposure mode and automatic exposure bracketing are rare treats at this price. Face detection has a dedicated button but we didn't find it particularly effective.

Digital image stabilisation is usually just another name for a high ISO mode and doesn't serve as a replacement for optical stabilisation. However, Samsung's Advanced Shake Reduction (ASR) is more sophisticated than most, taking two photos in very quick succession and carefully overlaying them to capture a shot with reduced blur, and without introducing excessive image noise as a high ISO speed would. Our tests revealed a higher success rate of blur-free shots with ASR



enabled, although it added a few seconds to the time required to process and save photos.

Sadly, the L730 isn't particularly fast to start with at around three seconds between shots without ASR. Pressing the shutter button any quicker delays things even further, as the camera ignores it rather than shooting as soon as it's ready. The auto-focus is extremely quick except in very low light, where it gives up altogether.

Image quality is typical of a budget camera, with reasonably sharp detail and excellent colours in bright light but a few problems elsewhere. Noise was visible in shots taken in overcast weather. Colours were muted and slightly skewed when shooting indoors without the flash. Because of the below-average quality and performance, the L730 isn't a bargain at this price.

Ben Pitt

SUMMARY

- ✓ Plenty of useful features
- ✗ Unexceptional image quality
- ✗ Poor performance

DIGITAL CAMERA 7.1 megapixels (3,072x2,304), 3x optical zoom (38-114mm), SDHC slot (10MB internal), Li-ion battery
PART CODE 8801089428516
DETAILS www.samsungcamera.com/uk

PERFORMANCE (see www.computershopper.co.uk/howwetest)

Battery life **324 shots**

-50% Reference +50% +100%

CHOOSING A... Compact Digital Camera

Follow the steps to find your ideal specs

RESOLUTION: 7 megapixels
ZOOM: 3x optical (35-105mm)
MONITORING: 2in, 100,000-pixel LCD screen
SUPPLIED MEMORY: 10MB internal
BATTERIES: 2x AA disposable
Recommended minimum in grey

1 A digital camera with the specifications shown in grey will suit those who want to take pictures to view on their PC and create 7x5in prints. It should cost around £80, but there may be hidden downsides such as slow performance and very basic user controls.

2 Spend more and you'll get a higher resolution. A 10-megapixel sensor has the potential to produce sharp prints up to A3 size, but only if it and the lens are suitably high quality. There are 12-megapixel compact cameras available, but we've yet to see one that's significantly better than 8-megapixel models. Most people don't print enlargements so a 7-megapixel sensor is sufficient.

3 A 3x zoom lens gives reasonable scope for framing your shots, but a larger range can do wonders for your photographic skills. Some compact cameras manage a 6x zoom while a few go as far as 10x. However, big zooms need optical image stabilisation to avoid blur at extreme settings. Alternatively, consider a wide-angle lens, denoted by a 28mm or lower minimum focal length.

4 Big LCD screens are a treat to use but they don't always offer sharper detail. A 2½in screen is common even in the budget market, but only the best have resolutions of 200,000 or more pixels.

5 Consider hidden costs: budget £20 for a 1GB memory card, as the bundled memory will never be enough. If your chosen camera doesn't have rechargeable batteries, budget an extra £15 to buy a set.

6 Don't forget that specifications tell you very little about image quality; you'll need to read our reviews for that. In a compact camera, we believe that the user shouldn't have to grapple with complicated controls to get great images in all lighting conditions.